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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,937	01/26/2004	George R. Kaplan	LKI 205.4	9317

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EXAMINER	
EVANS, GEOFFREY S	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,937	KAPLAN ET AL.	
	Examiner	Art Unit	
	Geoffrey S. Evans	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *126-201* is/are pending in the application.

4a) Of the above claim(s) *177-201* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *126-153,160,162-166,168-172 and 174-176* is/are rejected.

7)☒ Claim(s) *154-159,161,167 and 173* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 126-131,133,136 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,10 of U.S. Patent No. 5,932,119. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim1 has a marking system (a pulse laser energy source), an alignment system (a workpiece mounting system and means for directing the laser energy onto a desired portion), a processor, and a mapping system(an imaging system). Regarding claim 127, claim 10 of U.S. Patent No. 5,932,199 discloses a diamond.

3. Claim 132 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,932,119 in view of Gresser et al. in U.S. Patent No. 4,392,476. Gresser et al. teaches using overlap markings (see figure 3 of Gresser et al.). It would have been obvious to adapt

claim 1 of U.S. Patent No. 5,932,119 in view of Gresser et al. to provide this to create larger markings than the size of the spot diameter of the laser beam.

4. Claims 137 and 138 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,932,119 in view of Rossenwasser et al. in U.S. Patent No. 5,753,887. Rossenwasser et al. teaches laser marking a serial number or a decoration (see column 2,lines 25-40) on a gemstone. It would have been obvious to adapt claim 1 of U.S. Patent No. 5,932,119 in view of Rossenwasser et al. to provide this for security of decoration purposes.

5. Claims 134,135,162-164, and 168 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claims 134,135, there is no disclosure in the instant application of mapping an internal feature. Regarding claims 162-164 and 168, there is no disclosure of the pattern being introduced to the mapping system by a user.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 150,151,152,153,160 are rejected under 35 U.S.C. 102(b) as being anticipated by Gresser et al. in U.S. Patent No. 4,392,476. Regarding claim 150, the preamble limitation "for a 3D diamond mapping apparatus capable of generating a map of a diamond whose surface is to be marked with a predetermined pattern and of determining a succession of marking points representing said pattern" is not found in the main body of the claims and is not necessary to breath life and meaning into the claims. Accordingly it is considered to be merely a statement of intended use and does not make this claim patentable over the Gresser et al. reference. Gresser et al. discloses a laser source (element 21) with focusing optics (element 66), a marking position establishing system(see table system 7 and elements 61,63,69,70) , and computer means (element 85) to manipulate said marking position to bring the laser beam and the diamond into successive marking positions. Regarding claim 151, Gresser et al. discloses a diamond orientation means (element 7) and a beam orientation means (elements 61,63,69,70; see figure 1). Regarding claim 152, see column 2,lines 63-68 and element 73 (which is a turntable; see column 3,lines 10-12). Regarding claim 153, by deflecting the beam along the X-axis (see elements 61,69) the optical path length is adjusted and deflecting the beam along the Z-axis (see elements 63,690 it moves the optical path along the central axis. Regarding claim 160, the computer adjusts the position of the diamond when the point is not in the cross hairs of the microscope (see column 5,lines 22-37).

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 139-149,165,169-171,175,176 are rejected under 35 U.S.C. 102(e) as being anticipated by Rossenwasser et al. in U.S. Patent No. 5,753,887. Rossenwasser et al. discloses a method of laser marking a gemstone surface with a laser light absorptive coating of ink or dye (see column 3,line 65 to column 4,line 4), and forming a permanent mark (engraving) into the surface of the gemstone. Regarding claim 142, Rossenwasser et al. discloses that the gemstone can be a diamond (see column 5,line 190. Regarding claims 144-147, Rossenwasser et al. discloses using the laser beam to engrave a serial number (see column 2,lines 36-40). Since the coating is more absorptive than the diamond, it allows a lower energy to be used to engrave the diamond.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 165,166,171,172, and 174 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gresser et al. in U.S. Patent No. 4,392,476 in view of Rosenwasser et al. in U.S. Patent No. 5,753,887. Gresser et al. discloses a method of laser marking a diamond surface by having the laser beam move to successive points on the surface in accordance with a predetermined pattern (e.g. see figure 3). Gresser et al. also discloses the user entering the pattern (indicia; see column 3,lines 35-42). Gresser et al. does not disclose coating the diamond surface with a material that is capable of interacting with a laser beam. Rosenwasser et al. teaches using a light absorptive coating to prevent internal damage to the diamond. It would have been obvious to adapt Gresser et al. in view of Rosenwasser et al. to provide this to prevent internal damage to the diamond and so that a less powerful laser beam can be used to engrave the diamond.

12. Applicant's arguments filed 28 February 2005 have been fully considered but they are not persuasive. Regarding the rejection of claims 134 and 135 under 35

U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, there is no support on the paragraph spanning pages 14 and 15 that the flaws or features are internal. Regarding the rejection of claims 162-164 and 168 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, it is agreed that claims 162-164 and 168 do not depend upon claim 161. Regarding the interpretation of claim language of claim 150, since this is an ex parte prosecution this interpretation of the preamble in claim 150 is appropriate. Please note that in the instant application Applicant has not acted as a lexicographer and defined the word "mapping". The word "mapping" is broad enough to include laser marking an entire surface according to a pattern in memory and does not require imaging of the diamond. Regarding claim 160, in Gresser et al. the user inherently must position the diamond in a predetermined position initially, and then the computer maps out the marking on the diamond by supplying instructions to the laser, optical system and table (element 7) to mark the diamond. Regarding the Rossenwasser et al. reference, there is no evidence supplied by Applicant to show that if the beam is focused, internal reflections do not occur. The coating used by Rossenwasser et al. is fully capable of absorbing a focused or unfocussed laser beam. One of ordinary skill in the art would recognize that with a coating that better absorbs the laser energy, less laser energy is required to mark a workpiece.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Claims 161,167,173,154-159 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1300.

GSE

Geoffrey S. Evans
Primary Examiner
Group 1700